

Message

From: Grambsch, Anne [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A28DEBE50C0E42CE937B0D01C12EB4B2-GRAMBSCH, ANNE]
Sent: 5/15/2017 5:06:15 PM
To: Peterson, Jeff [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ece942ec41964954bc5371a68f19e464-Peterson, Jeff]
CC: Miller, Andy [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=04e57a73701b40d39de82ed5ff30475a-Miller, Andy]; Martinich, Jeremy [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4042067053eb4feab35127a0b65e517b-JMartini]; Morefield, Philip [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=46611b315da745bc9f605e7792b86a56-Morefield, Philip]; Weaver, Chris [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5739dd33af9144dc8a8047e3f90e59ef-Weaver, Chris]
Subject: RE: NCA 4 and population

Yes, there seems to have been a recent spate of articles on SLR-induced migration. In addition to the Hauer paper, there was the:

Hino paper on Managed Retreat: <http://www.nature.com/nclimate/journal/v7/n5/full/nclimate3252.html>

Aerts letter on Impacts beyond the coast: <http://www.nature.com/nclimate/journal/v7/n5/full/nclimate3279.html>

Ex. 5 Deliberative Process (DP)

Anne

From: Peterson, Jeff
Sent: Monday, May 15, 2017 11:54 AM
To: Grambsch, Anne <Grambsch.Anne@epa.gov>
Cc: Miller, Andy <Miller.Andy@epa.gov>; Martinich, Jeremy <Martinich.Jeremy@epa.gov>
Subject: RE: NCA 4 and population

Thanks Anne

Part of my interest in population is the potential impact of sea level rise on population change in regions but more specifically the projected higher rates of population growth for coastal regions that might result in increases in the estimates of persons displaced by SLR and the costs of property damage as a result of SLR occurring later in this century.

Here are a couple of articles on the issue:

- *Millions projected to be at risk from sea-level rise in the continental United States:*
<http://www.nature.com/nclimate/journal/v6/n7/full/nclimate2961.html>
- *Migration induced by sea-level rise could reshape the US population landscape;*
<http://www.nature.com/nclimate/journal/v7/n5/full/nclimate3271.html>

And here is some work by Brian Packard

(<http://www.sciencedirect.com/science/article/pii/S0169204616301499>) re the impacts on water supply systems as a result of SLR which draws a conclusion that rural and central parts of the country may see population while urban and coastal areas see significant increases...

Increasing populations are creating inherently difficult water resource decisions for policy makers to address. Further complicating these matters are the spatial shifts in population, as more US residents are migrating from rural settings back to large urban centers in the Southwest, Pacific Northwest, and coastal regions (Buhaug & Urdal, 2013). We found that counties within and surrounding large urban centers were most likely to experience some of the greatest increases in demand (for example see Fig. 6). Understanding the spatial shifts of populations to large urban centers and the resulting projected domestic water needs can allow for city and regional planners to preemptively adapt and respond. Typically water infrastructure improvement projects are paid, both directly and indirectly, through revenue from the water system's customer base (American Rivers, 2013 ; Stallworth, 2003). Therefore, while urban centers are likely to experience the greatest increases in demand, they will have corresponding increases in tax bases to help alleviate future costs. Comparatively, a small proportion of counties with large increases in demand were identified to be located away from urban centers across all four scenarios. Several of those counties have tax bases that may not be able to support the necessary infrastructure to meet projected needs (i.e. relatively low median income). As communities attempt to increase their resiliency by responding to changing water demands, these counties identified may be most vulnerable to shortages and lack the necessary capital to respond. It is conceivable to envision that state and the federal government could use prioritization methods such as the one presented here when deciding where to invest funds for water capital improvement projects. To further support efforts such as these, the county level information has been provided publically on the US Environmental Protection Agencies EnviroAtlas (www.epa.gov/enviroatlas) (Pickard, Daniel, Mehaffey, Jackson, & Neale, 2015).

Does the guidance to the Regional authors speak to the intensity of population changes in urban coastal areas...ie as opposed to averaged regional population changes?

Thanks

Jeff Peterson
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Cell: Ex. 6 Personal Privacy (PP)

Internal, Deliberative, Not for Release

From: Grambsch, Anne
Sent: Monday, May 15, 2017 11:09 AM
To: Miller, Andy <Miller.Andy@epa.gov>; Peterson, Jeff <Peterson.Jeff@epa.gov>
Subject: RE: NCA 4 and population

Hi,

A suite of scenarios for NCA4 have been developed and we've had several briefings/webinars on them.

You can see them here:

<https://scenarios.globalchange.gov/>

There is a button that takes you to here:

<https://scenarios.globalchange.gov/population-land-use>

Included is a hot link that takes you to the ICLUS page which includes a button that takes you to the NCA4 scenarios:

<https://www.epa.gov/iclus/iclus-data-northwest-region>

Anne

From: Miller, Andy

Sent: Friday, May 12, 2017 2:54 PM

To: Peterson, Jeff <Peterson.Jeff@epa.gov>

Cc: Grambsch, Anne <Grambsch.Anne@epa.gov>

Subject: RE: NCA 4 and population

Jeff – the authors have been working with consistent scenarios from the outset, with ICLUS as one of the scenario sets.

Ex. 5 Deliberative Process (DP)

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Ex. 6 Personal Privacy (PP) (cell)

From: Peterson, Jeff

Sent: Friday, May 12, 2017 2:22 PM

To: Miller, Andy <Miller.Andy@epa.gov>

Cc: Grambsch, Anne <Grambsch.Anne@epa.gov>

Subject: RE: NCA 4 and population

Thanks

That all sounds fine...

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Perhaps Anne has ideas on this?

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From: Miller, Andy
Sent: Friday, May 12, 2017 1:45 PM
To: Peterson, Jeff <Peterson.Jeff@epa.gov>
Subject: RE: NCA 4 and population

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From: Peterson, Jeff
Sent: Friday, May 12, 2017 1:24 PM
To: Miller, Andy <Miller.Andy@epa.gov>
Subject: NCA 4 and population

Is there a chapter in NCA4 that addresses expected long range (2100) changes in population...both total population increases... and shifts in population in different regions and or away from areas impacted by SLR etc?

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